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| 10/788,813      | 02/27/2004  | David W. Proctor     | MSFT-2872/306077.02 | 7349             |

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| EXAMINER |
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KUMAR, ANIL N

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| ART UNIT | PAPER NUMBER |
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2174

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/788,813

**Applicant(s)**

PROCTOR ET AL.

**Examiner**

ANIL N. KUMAR

**Art Unit**

2174

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This action is in response to the amendment filed on October 16th, 2007. Claims (1-42) are pending and have been considered below.

***Claim Objections***

Claims 32 and 33 are objected to because of the following informalities: Ending the claim with "... of claim #."

Appropriate corrections are required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 has "a first region" and is dependent on Claim 1 which also has "a first region" as well. Hence the claim is indefinite.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Combs et al. (US 2002/0021289 A1) in view of Perttunen (US 6,359,635 B1) and in further view of Westerman et al. (US 2002/0015024 A1).

Claims 1, 13, 24, 34, 36 and 38: Combs et al. disclose, a method, device and a medium for interacting with a user interface control including a touchpad control (Fig. 2A) comprising:

- a touchpad control (Fig. 2A);
- receiving input to the touchpad control (i.e. ...the input device 18 comprises a touchpad 19.... paragraph [0080] );
- determining a location on the touchpad control and a corresponding degree of functionality associated with the location (i.e. ... The coordinate sensor 122... and logic to translate the location of that switch to a meaningful value relative to the pad surface 110... paragraph [0101] and Fig. 2);
- and outputting at least one of at least one function call and at least one signal based upon the location and degree of functionality associated with the location (i.e. ... the touchpad reports to the attached computer system the coordinates of the location touched. In response, the computer performs the function... paragraph [0006]);

- a computer readable medium including computer executable modules (i.e. ...

The data processing unit receives controlling software from a read only memory (ROM) that is usually packaged in the form of a cartridge... paragraph [0003];

but does not disclose

- a touchpad control having a touch-sensitive surface comprising substantially the shape of an arc, the touch sensitive surface comprising a first region associated with a first set of functionality, wherein the touchpad control is configured to detect a touch within the first region and to select a degree of functionality dependent upon a relative location of the touch within the first region.

However, Perttunen discloses, methods, articles and apparatus for visibly representing information and for providing an input interface, such as, touchpad, and further disclose that the regions may be displayed with alternative concave shapes, the region representing node 0 may be omitted or may be displayed with an alternative substantially convex or concave shape (col 16 lines 1-13 and Fig. 9). Therefore, it would have been obvious to one having ordinary skill in the art at the time to provide a touchpad, as taught by Perttunen, in Combs et al. One would be motivated to provide a touchpad in a concave shape, as it is very natural shape that can be accessed by a user finger.

Furthermore, Westerman et al. discloses methods to calculate distance, velocity and accelerations based on input from a touchpad (i.e. ... measuring, storing and

transmitting to a computing device two or more representative tangential velocities during touch device manipulation... paragraph [0045]). Therefore, it would have been obvious to one having ordinary skill in the art at the time to provide a methods, as taught by Westerman et al., to determine the direction, velocity, acceleration from a touchpad, so that various degrees of functionality can be mapped based on the location, in the modified Combs et al. One would be motivated to provide means to determine various aspects of input from a touchpad, if one wants to provide a wide range of functionality.

Claims 2 and 14: Combs et al. and Perttunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claims 1 and 13, above. Furthermore Combs et al. disclose, wherein the arc is of substantially uniform width (Fig. 2A).

Claims 3 and 15: Combs et al. and Perttunen and Westerman et al. disclose a method and device for interacting with a user interface control including a touchpad control as in Claims 2 and 14, above. Furthermore Combs et al. disclose, wherein the touchpad control is substantially in the shape of a quarter circle (Fig. 2A).

Claims 4 and 16: Combs et al. and Perttunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a

touchpad control as in Claims 1 and 13, above. Furthermore Combs et al. disclose, wherein the arc is at least one of (A) thinner than at least one end of the arc at the middle of the arc and (B) thicker than at least one end of the arc at the middle of the arc and the arc includes at least one of (C) a curved end and (D) a substantially straight end (Fig. 2A).

Claims 5-6, 17-18, 28-29 and 42: Combs et al. and Perttunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claims 1, 13, 24 and 38, above. Furthermore Combs et al. disclose, wherein the touchpad control further comprises a second region associated with a second set of functionality different from said first function, the touchpad control being configured to detect a touch within the second region and to select a degree of functionality dependent upon relative location of the touch within the second region, wherein said first region and said second region are divided substantially about the middle of the arc or about orthogonal center (i.e. ... virtually any pattern, or combination of patterns and symbols... an each be mapped to a region of the touchpad... paragraph [0081] and Fig. 2A).

Claims 7-8, 19-20 and 30-31: Combs et al. and Perttunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claims 6, 18 and 29, above. Furthermore

Combs et al. disclose, wherein said first set of functionality provides a set of functionality opposite to said second set of functionality and set of functionality includes varying degrees of functionality for at least one of Escape, Start, Options, More, Less OK, Back, Forward, Play, Pause, Up, Down, Fast Forward, Reverse, Skip Forward, Skip Backwards, Menu, Left, Right, Mute, Volume Up, Volume Down, Raise Light and Lower Light functionalities (i.e. ... following functions can be supported by the default template graphic design inscribed in or on the pad surface 110: "enter," "exit," "pause," "previous," "next," and arrow keys (up, down, left, and right)... paragraph [0082] and Fig. 2A).

Claims 9-10, 21-22, 26-27 and 40-41: Combs et al. and Perttunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claims 6, 18, 24 and 38, above. Furthermore, Westerman et al. disclose, wherein the degree of functionality is determined based upon a distance of an input in said first region of control from the centerline of the touch pad arc; is determined based upon at least one of (A) a velocity and (B) an acceleration associated with an, input to the user interface control calculated from recent historical interaction with the user interface control (methods to calculate distance, velocity and accelerations based on input form a touchpad i.e. ... measuring, storing and transmitting to a computing device two or more representative tangential velocities during touch device manipulation... paragraph [0045]).



Claim 11: Combs et al. and Pertunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claim 1, above. Furthermore Combs et al. disclose, wherein said arc is substantially in the form of a curved cavity in the surface of a device including the user interface control (i.e. ... pad surface 110; that is, the default template graphic image is permanently written, printed, painted, carved... paragraph [0081 and Fig. 2F]).

Claims 12 and 23: Combs et al. and Pertunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claims 1 and 13, above. Furthermore Combs et al. disclose, implemental in any of a portable media player, a remote control for a computing device, a computing device, a swappable component of a computing device and a component for augmenting a computing device (i.e. ... details of the video digital to analog converter used in the system of the present invention [0017] and Fig. 1C).

Claims 25 and 39: Combs et al. and Pertunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claims 1 and 13, above. Furthermore Combs et al. disclose, performing the functionality to the appropriate degree in accordance

with said at least one of at least one function call and at least one signal (i.e. ... the touchpad reports to the attached computer system the coordinates of the location touched. In response, the computer performs the function... paragraph [0006]).

Claim 32: Combs et al. and Perttunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claim 24, above. Furthermore Combs et al. disclose, a computer readable medium including computer executable modules (i.e. ... The data processing unit receives controlling software from a read only memory (ROM) that is usually packaged in the form of a cartridge... paragraph [0003]).

Claim 33: Combs et al. and Perttunen and Westerman et al. disclose, a method and device for interacting with a user interface control including a touchpad control as in Claim 24, above. Furthermore Combs et al. disclose, a computing device comprising means for performing the methods (i.e. ... computer system comprising a central processing unit (CPU)... Abstract).

Claims 35 and 37: Combs et al. and Perttunen and Westerman et al. disclose, a medium and device for interacting with a user interface control including a touchpad control as in Claims 34 and 36, above. Furthermore Combs et al. disclose, a touchpad control substantially in the shape of an arc (i.e. made-up of

arcs, Fig. 2A) or a curved cavity (i.e. ... pad surface 110; that is, the default template graphic image is permanently written, printed, painted, carved... paragraph [0081] and Fig. 2F);

### ***Response to Arguments***

1. Applicant's arguments filed on October 26th, 2007 have been fully considered but they were found not persuasive.

A. Applicant argues, "While the physical enclosure 100 of the touchpad 19 and joysticks 20a, 20b may have curved edges, the touchpad surface 110 itself is substantially rectangular, and not "in the shape of an arc" as recited in Applicant's Claim 1" The Examiner maintains the rejection and points out that this is moot in view of new rejection.

B. Applicant argues, "Combs simply does not teach or suggest different degrees of functionality depending upon a relative location of the touch within the first region". The Examiner maintains the rejection and points out that this is moot in view of new rejection.

C. Applicant argues, Westerman does not teach or suggest the limitation "the touch sensitive surface comprising a first region associated with a first set of functionality, wherein the touchpad control is configured to detect a touch within the first region and to select a degree of functionality dependent upon a relative location of the touch within the first region". The Examiner disagrees and maintains the rejection. Westerman et al. disclose, methods to calculate distance, velocity and accelerations based on input from a touchpad (i.e. ... measuring, storing and transmitting to a computing device two or more representative tangential velocities during touch device manipulation... paragraph [0045]). Therefore, it would have been obvious to one having ordinary skill in the art at the time to provide a methods, to determine the direction, velocity, acceleration from a touchpad, and map various degrees of functionality based on the location, direction and velocity of the user's finger movement.

### **Conclusion**

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anil N. Kumar whose telephone number is (571) 270-1693. The examiner can normally be reached on Wednesdays and alternate Mon-Tue and Thu-Fri EST (Alternate Mon-Tue and Thu-Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANK

12/15/2007

/David A Wiley/

Supervisory Patent Examiner, Art Unit 2174